

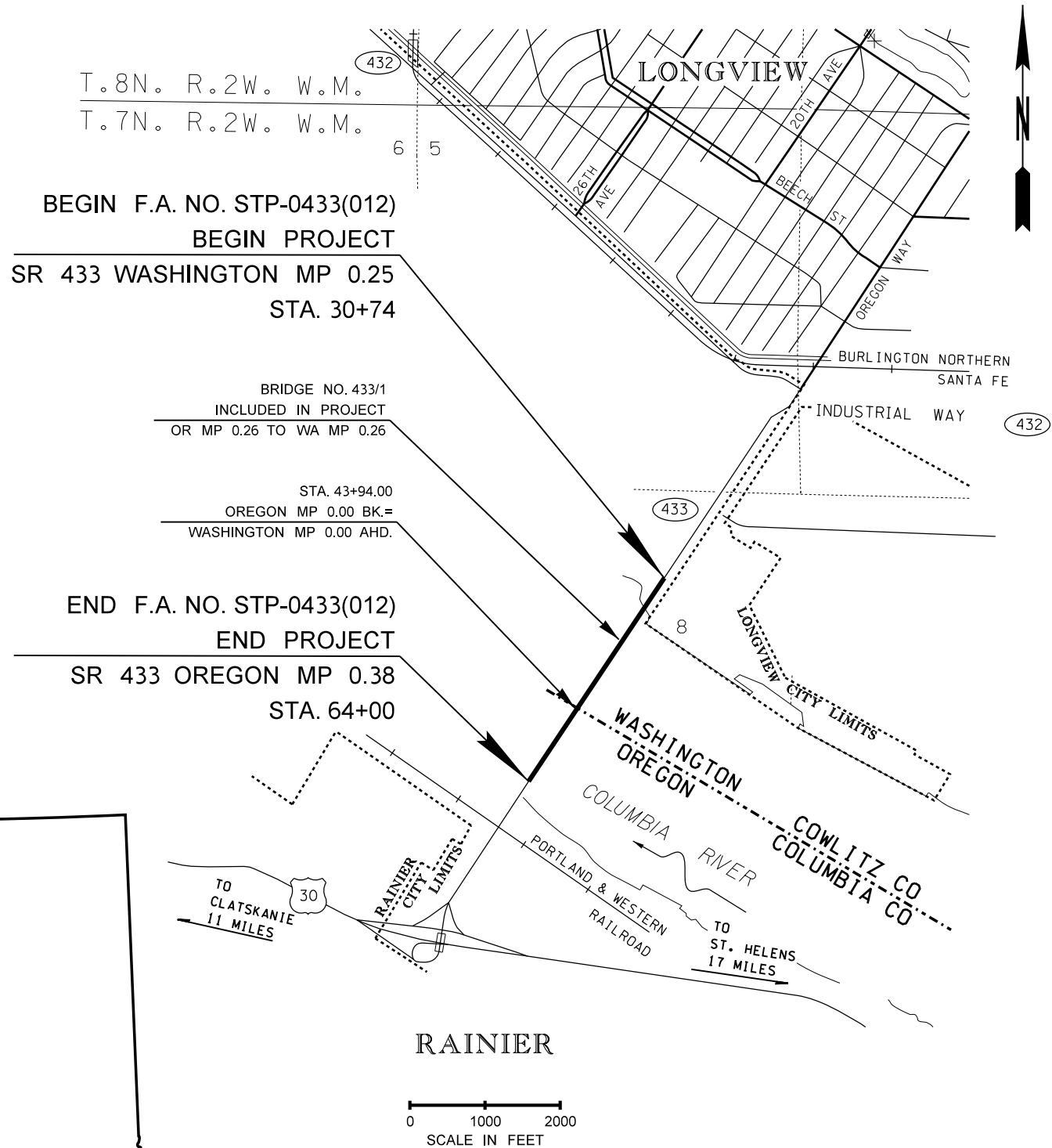
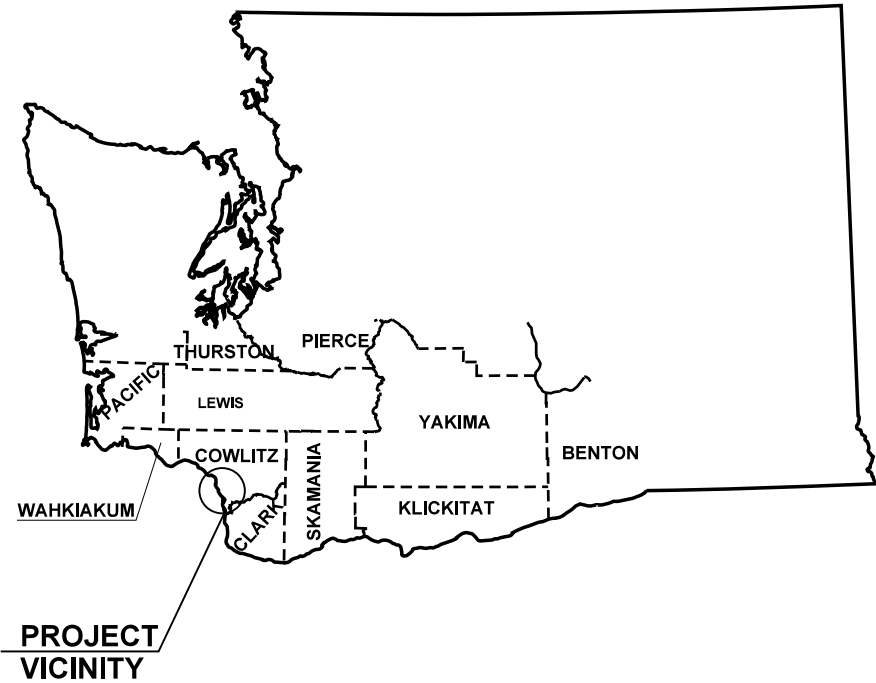
# INDEX

[illegible]

	PLAN
	REFERENCE
	NO.
	SHEET
	OF
	SHEETS




NOTE

ALL SHEET REFERENCES, FIRST NOS. OF STRUCTURE CODE DESIGNATIONS AND MATCH LINE SHEET REFERENCES, ETC., THROUGHOUT THE PLANS, REFER TO THE ENTRY IN THE PLAN REFERENCE NUMBER BOX.



FILE NAME G:\444304004 - Design\02 - Design Projects\D43321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\XL6507.dgn																				Plot 1									
TIME 10:11:21 AM								REGION NO. STATE		FED.AID PROJ.NO.  NHPP-0433(012)								SR 433 LEWIS AND CLARK BRIDGE EXPANSION JOINT REPLACEMENT		PLAN REF NO									
DATE 10/14/2022								10 WASH												VM1									
PLOTTED BY satakr																				SHEET									
DESIGNED BY R.SATAK																				1									
ENTERED BY R.SATAK																				OF									
CHECKED BY D. DOUMIT																				17									
PROJ. ENGR. P. REYES																				SHEETS									
REGIONAL ADM. C. FRANCIS																													
REVISION				DATE		BY																							
						P.E. STAMP BOX						DATE																	
																		INDEX / VICINITY MAP											

## PROJECT LICENSED PROFESSIONAL CERTIFICATES

 <b>Pedro Reyes</b> <b>Oct 25, 2022</b> AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	 <b>Bijan Khaleghi</b> <b>Oct 18, 2022</b> AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	 <b>Nick Rodda</b> <b>Oct 18, 2022</b> AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.

NOTES:

THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION  
OF THE LICENSED PROFESSIONALS THAT HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.

THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS  
OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.

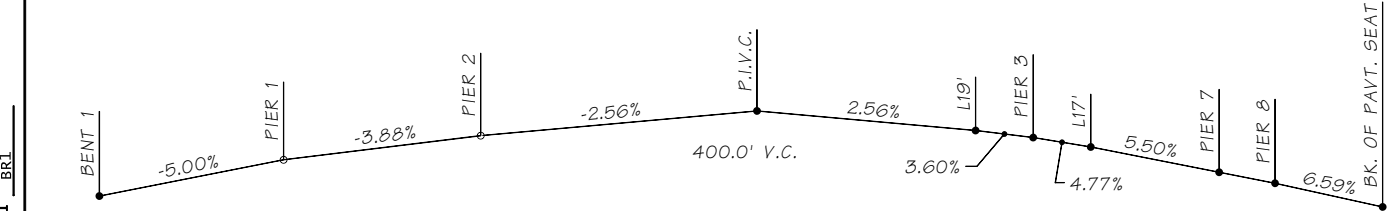
FILE NAME						G:\444304\04 - Design Projects\ID43321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\XL6507.dgn								Plot 14	
TIME		10:14:29 AM						REGION NO.		STATE		FED.AID PROJ.NO. NHPP-0433(012)		PLAN REF NO	
DATE		10/14/2022						10		WASH				CT1	
PLOTTED BY		satakr						JOB NUMBER						SHEET 2 OF 17 SHEETS	
DESIGNED BY		R. SATAK						22X338				LOCATION NO.		CERTIFICATION SHEET	
ENTERED BY		R. SATAK						CONTRACT NO.							
CHECKED BY		D. DOUMIT													
PROJ. ENGR.		P. REYES													
REGIONAL ADM.		C. FRANCIS													
				REVISION		DATE		BY							



SR 433 FILE NO. SHEET BR1

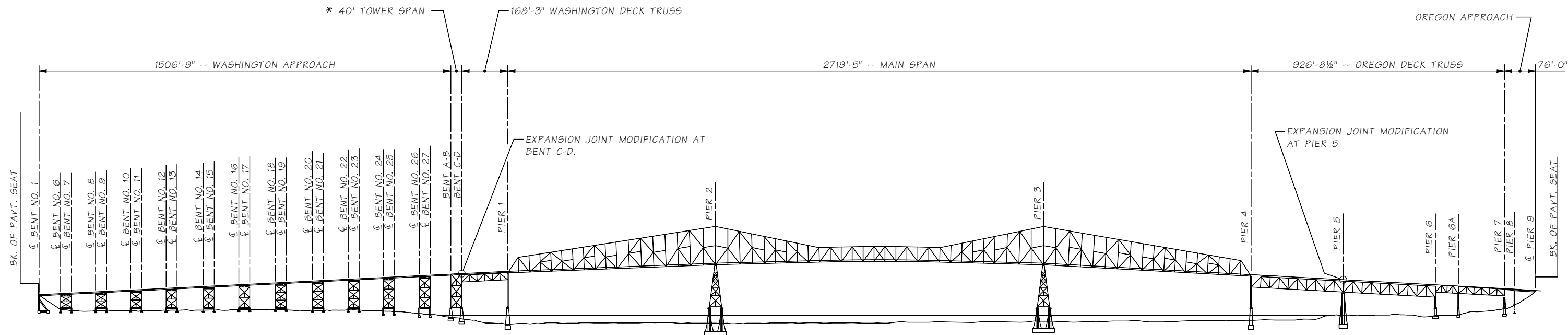
Mon Oct 03 13:48:03 2022

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR>window files\001 - LAYOUT.WND									
Supervisor	Rodda, NT										
Designed By	Rodda, NT	02/22									
Checked By	Chavez, G	06/22									
Detailed By	Davis, E	02/22									
Bridge Projects Engr.											
Prelim. Plan By											
Architect/Specialist											
	DATE	REVISION	BY	APP'D							

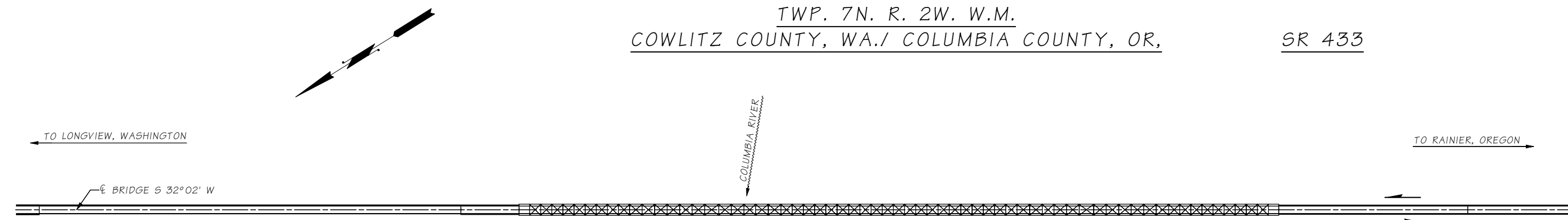


PROFILE PER 2002 PLANS

PROFILE INFORMATION TO BE FIELD VERIFIED BY THE CONTRACTOR



ELEVATION



PLAN

EXPANSION JOINT MODIFICATION

PE: STAMP BOX	BRIDGE AND STRUCTURES OFFICE		PE: STAMP BOX		SR 433 LEWIS AND CLARK BRIDGE EXPANSION JOINT REPLACEMENT COLUMBIA R-LEWIS & CLARK BR. NO. 433/1 LAYOUT	BRIDGE SHEET NO. BR1 SHEET 4 OF 17 SHEETS
SEE SHEET CT1 DATE:			SEE SHEET CT1 DATE:			

GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION DATED 2023.
2. THE REMOVAL AND REPLACEMENT PORTIONS OF THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION 2020.
3. ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000.
4. UNLESS OTHERWISE SHOWN IN THE PLANS, CONCRETE COVER MEASURED FROM THE FACE OF CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2¼" AT THE TOP OF THE BRIDGE DECK, 1" AT THE BOTTOM OF THE BRIDGE DECK AND 1½" AT ALL OTHER LOCATIONS.
5. FALSEWORK SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS IN THE STRUCTURE.
6. ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL UNLESS OTHERWISE SHOWN. EXISTING FEATURES AND DIMENSIONS ARE BASED ON INSPECTION REPORTS, SITE VISITS AND AS-BUILT PLANS. ALL DIMENSIONS NOTED WITH AN ASTERISK (\*) SHALL BE FIELD MEASURED BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH CONSTRUCTION.
7. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, CONCRETE HEADER REMOVAL WORK SHALL NOT PROCEED UNTIL NEW BULKHEAD AND FINGER JOINT PANEL ASSEMBLIES ARE ON SITE AND AVAILABLE FOR INSTALLATION.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL SHALL BE STRUCTURAL LOW ALLOY STEEL IN ACCORDANCE WITH AASHTO M270 GRADE 50 OR ASTM A572 GRADE 50. ASTM A572 GRADE 50 STEEL SHALL MEET THE CVN REQUIREMENTS FOR AASHTO M270.
2. FINGER JOINT PANELS SHALL BE MACHINED FROM STRUCTURAL LOW ALLOY STEEL AND SHALL BE GALVANIZED AFTER FABRICATION.
3. UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE ASTM F3125 GRADE A325 TYPE 1 HIGH STRENGTH BOLTS WITH BOLT HEADS TOWARD THE OUTSIDE AND UNDERSIDE OF THE BRIDGE. ALL BOLTS SHALL BE 7⁄8"Ø UNLESS SHOWN OTHERWISE IN THE PLANS. NUTS AND WASHERS SHALL CONFORM TO SECTION 9-06.5(3). ALL BOLTS AND HARDWARE SHALL BE HOT DIP GALVANIZED. TENSION CONTROL FASTENERS ARE NOT PERMITTED. ALL BOLT HOLES SHALL BE THE BOLT DIAMETER PLUS 1⁄16", UNLESS CALLED OUT OTHERWISE.
4. ALL WELDING SHALL BE DONE TO MINIMIZE DISTORTION. THE WELDING SEQUENCES AND PROCEDURES TO BE USED SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO THE START OF WELDING.
5. GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM F2329, AASHTO M111, OR AASHTO M232 AS APPLICABLE.
6. EXCEPT FOR THE FINGER JOINT PANELS, ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SECTION 6-07. PRIOR TO PAINTING OVER GALVANIZED BOLTS, SURFACE PREPARATION AND ADHESION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 6-07.3(11)A.

SUGGESTED CONSTRUCTION SEQUENCE

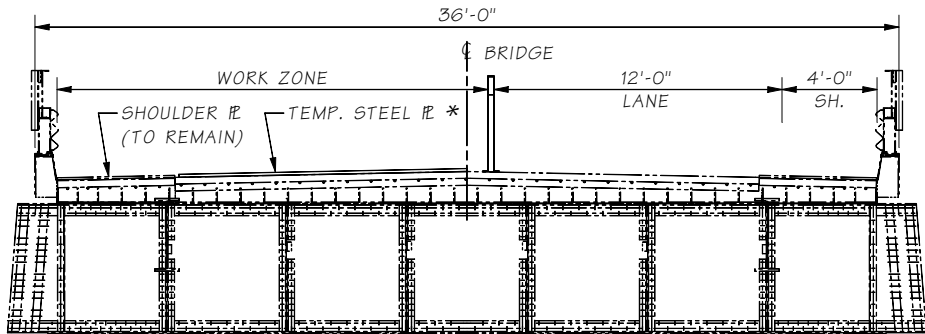
THIS SUGGESTED CONSTRUCTION SEQUENCE SHOULD BE CONSIDERED FOR INFORMATION ONLY AND IS NOT INTENDED TO SHOW EVERY STAGE THE CONTRACTOR MAY NEED TO COMPLETE THE PROJECT. WHERE NEEDED, THE CONTRACTOR SHALL DEVISE THEIR OWN CONSTRUCTION SEQUENCE OR MODIFY THIS ONE TO COMPLETE THE WORK.

STAGE 1

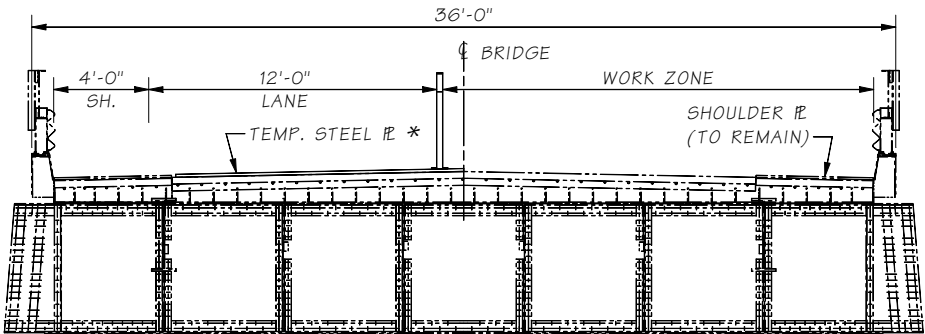
1. SETUP TRAFFIC CONTROL AND RESTRICT TRAFFIC TO ONE ALTERNATING LANE
2. UNBOLT AND REMOVE FINGER JOINT ASSEMBLIES WITHIN THE WORK ZONE
3. PARTIALLY REMOVE CONCRETE HEADERS TO THE LIMITS SHOWN IN THE PLANS
4. REMOVE AND RECONSTRUCT STEEL BULKHEAD AS SHOWN IN THE PLANS
5. PLACE ROADWAY PLATE OVER JOINT OPENING AND RECONFIGURE TRAFFIC FOR STAGE 2

STAGE 2

1. UNBOLT AND REMOVE FINGER JOINT ASSEMBLIES WITHIN THE WORK ZONE
2. PARTIALLY REMOVE CONCRETE HEADERS TO THE LIMITS SHOWN IN THE PLANS
3. REMOVE AND RECONSTRUCT STEEL BULKHEAD AS SHOWN IN THE PLANS
4. CLOSE BRIDGE TO ALL TRAFFIC AND REMOVE TEMPORARY ROADWAY PLATE
5. PLACE CONCRETE HEADER USING CLASS 4000 CONCRETE
6. CURE CONCRETE IN ACCORDANCE WITH 6-02.3(11) FOR ALL OTHER CONCRETE SURFACES
7. INSTALL NEW FINGER JOINT ASSEMBLIES AT BENT C-D
8. REMOVE TRAFFIC CONTROL AND OPEN ALL LANES TO TRAFFIC



STAGE 1



STAGE 2

\* TEMPORARY STEEL PLATE SHALL BE DESIGNED FOR HL-93 LOADING WITH A DEFLECTION LIMIT OF L/300 AND SHALL BE CAPABLE OF ACCOMMODATING A TOTAL MOVEMENT RANGE OF 10 INCHES. PLATE DETAILS SHALL BE SUBMITTED TO THE ENGINEER AS A TYPE 2E WORKING DRAWING

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR>window files\002 - GENERAL NOTES.wnd					
Supervisor	Rodda, NT			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
Designed By	Rodda, NT	02/22		10	WASH.		TOTAL SHEETS
Checked By	Chavez, G	06/22					
Detailed By	Davis, E	02/22					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist		DATE	REVISION	BY	APP'D		

SEE SHEET CT1  
DATE:

BRIDGE AND STRUCTURES OFFICE

SEE SHEET CT1  
DATE:

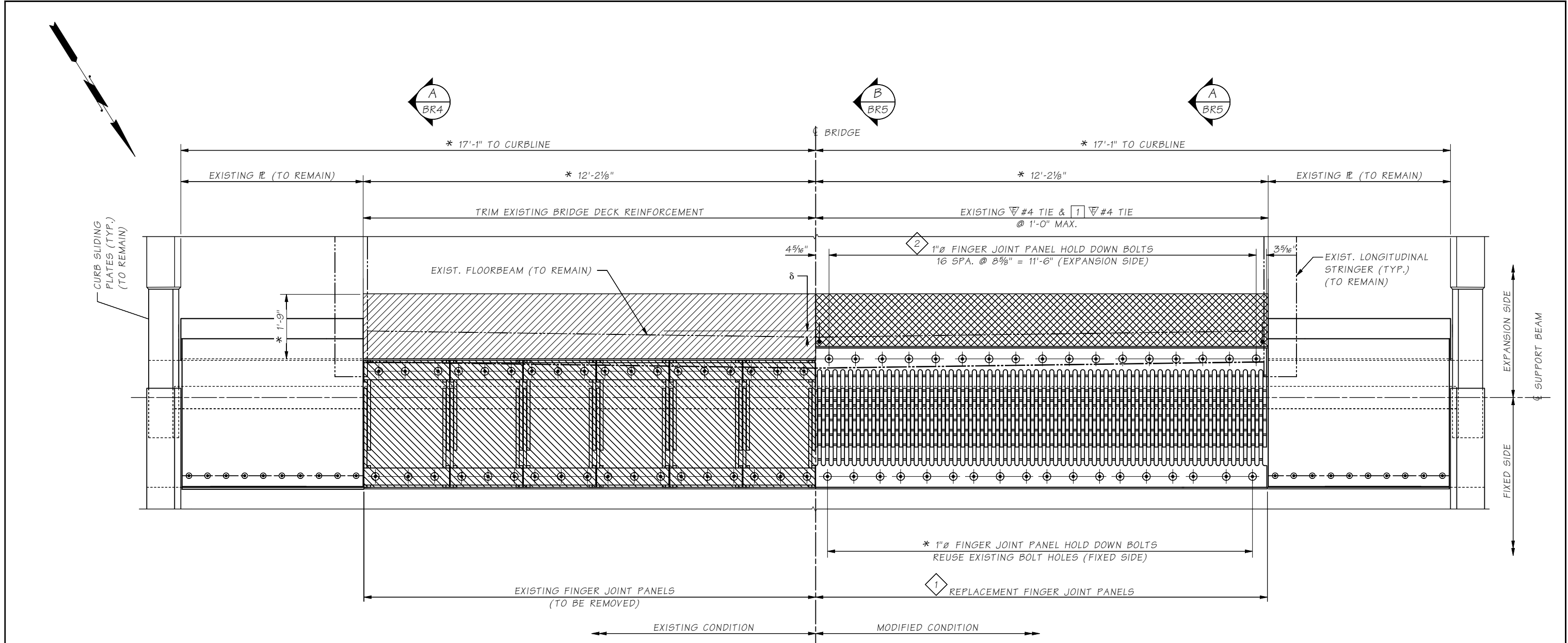
Washington State  
Department of Transportation

SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1

GENERAL NOTES

BRIDGE SHEET NO.  
BR2

SHEET 5 OF 17 SHEETS



PLAN

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR>window files\003 - REMOVAL PLAN.wnd					
Supervisor	Rodda, NT						
Designed By	Rodda, NT	02/22					
Checked By	Chavez, G	06/22					
Detailed By	Davis, E	02/22					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
DATE	REVISION	BY	APP'D				

PE: STAMP BOX

BRIDGE AND STRUCTURES OFFICE

SEE SHEET CT1

PE: STAMP BOX

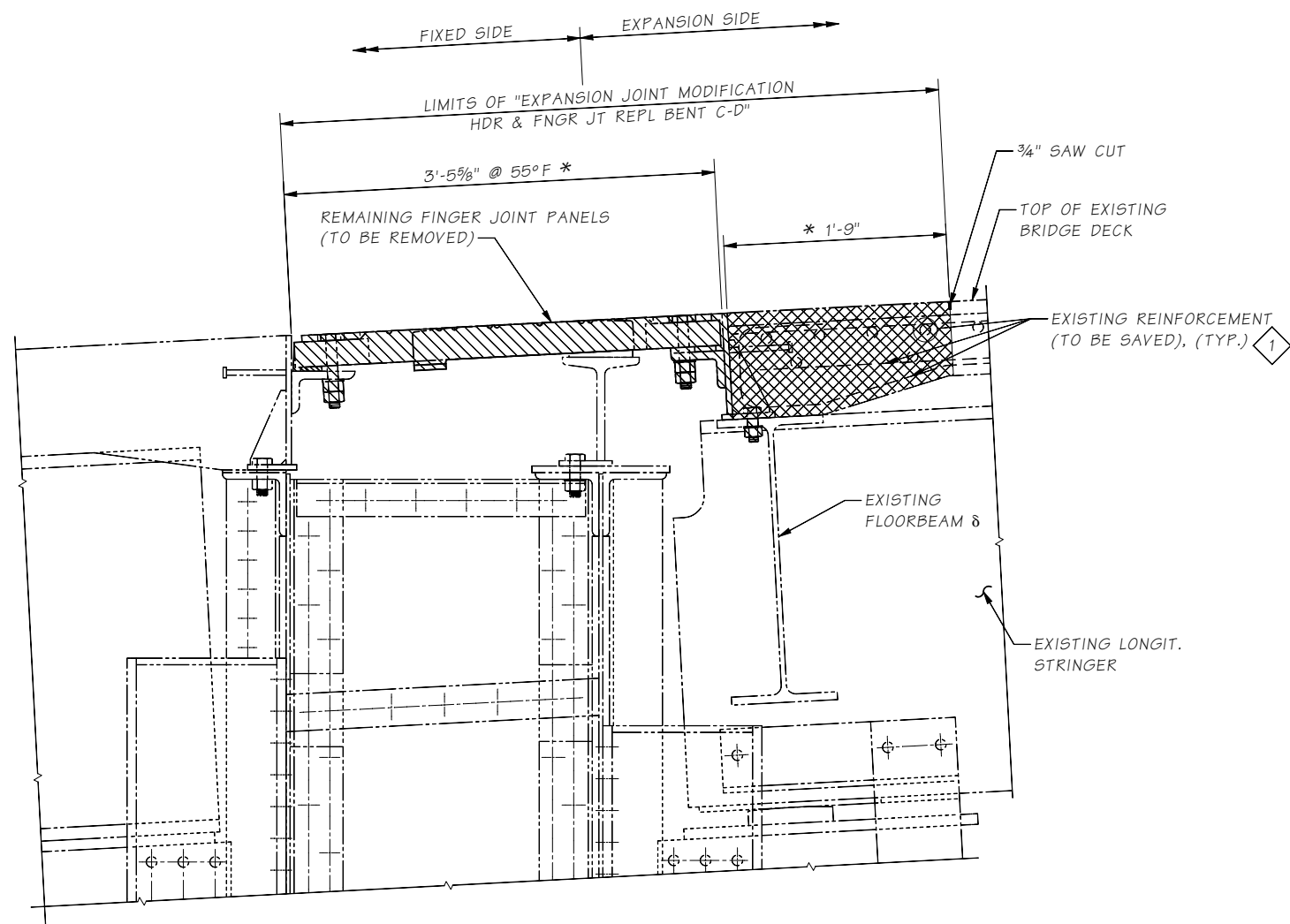
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

SEE SHEET CT1

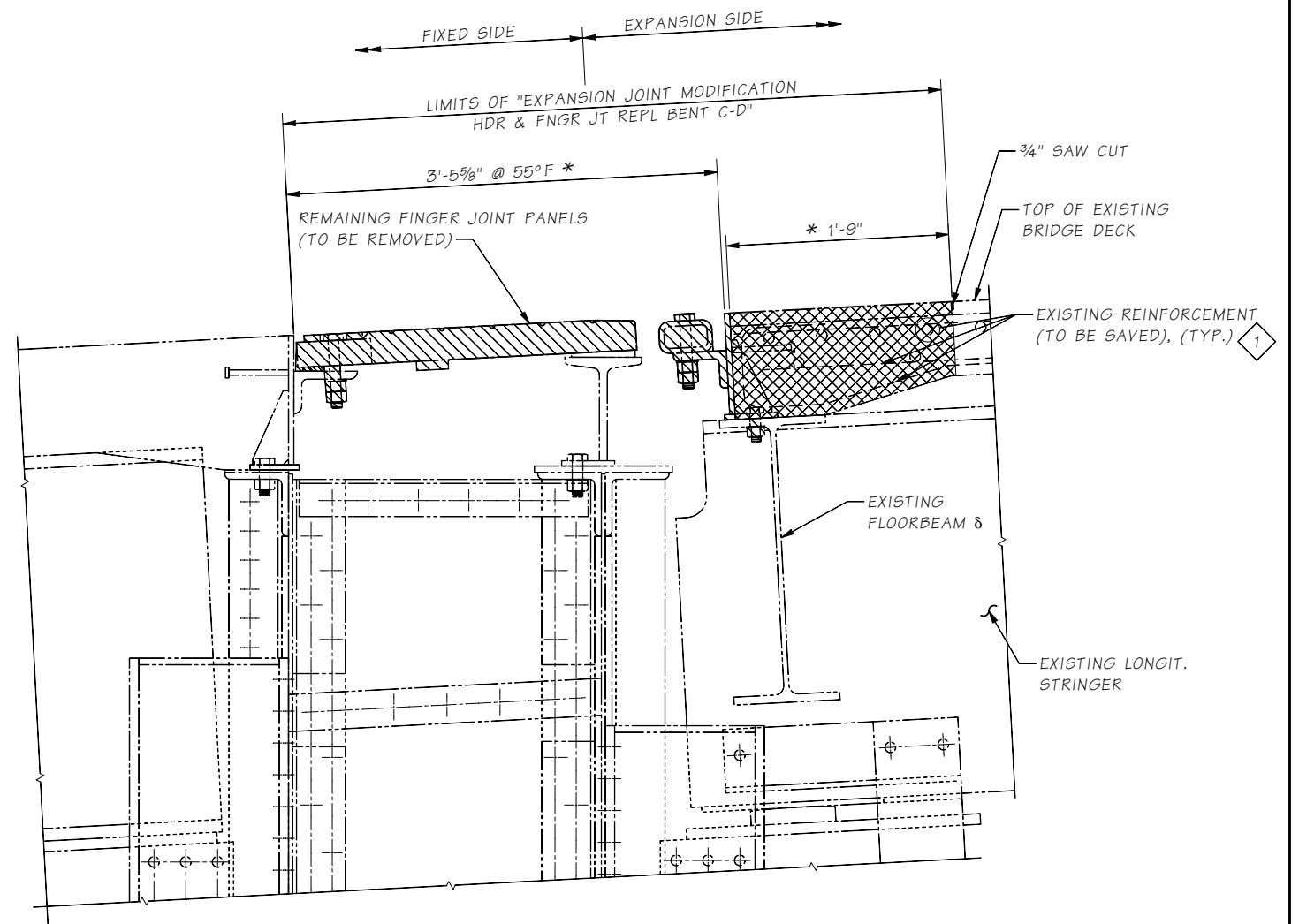
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1  
EXPANSION JOINT MODIFICATION  
PLAN - BENT C-D



BRIDGE SHEET NO.  
BR3  
SHEET  
6  
OF  
17  
SHEETS



SECTION A  
WEST SIDE  
BR3



SECTION A  
EAST SIDE  
BR3

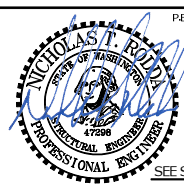
-  - LIMITS OF FULL REMOVAL
-  - LIMITS OF PARTIAL REMOVAL

δ EXISTING FLOORBEAM IS BENT APPROXIMATELY 2" OUT OF PLANE AT 1/2 OF BRIDGE.

\* CONTRACTOR TO FIELD VERIFY DIMENSIONS PRIOR TO SAWCUTTING AND REMOVAL

1 CONCRETE DEMOLITION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 2-02.3(2)A2

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR>window files\004 - REMOVAL DETAILS.wnd					
Supervisor	Rodda, NT			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
Designed By	Rodda, NT	02/22		10	WASH.		TOTAL SHEETS
Checked By	Chavez, G	06/22					
Detailed By	Davis, E	02/22					
Bridge Projects Engr.				JOB NUMBER			
Prelim. Plan By				22X338			
Architect/Specialist				CONTRACT NO.			
	DATE	REVISION	BY	APP'D			



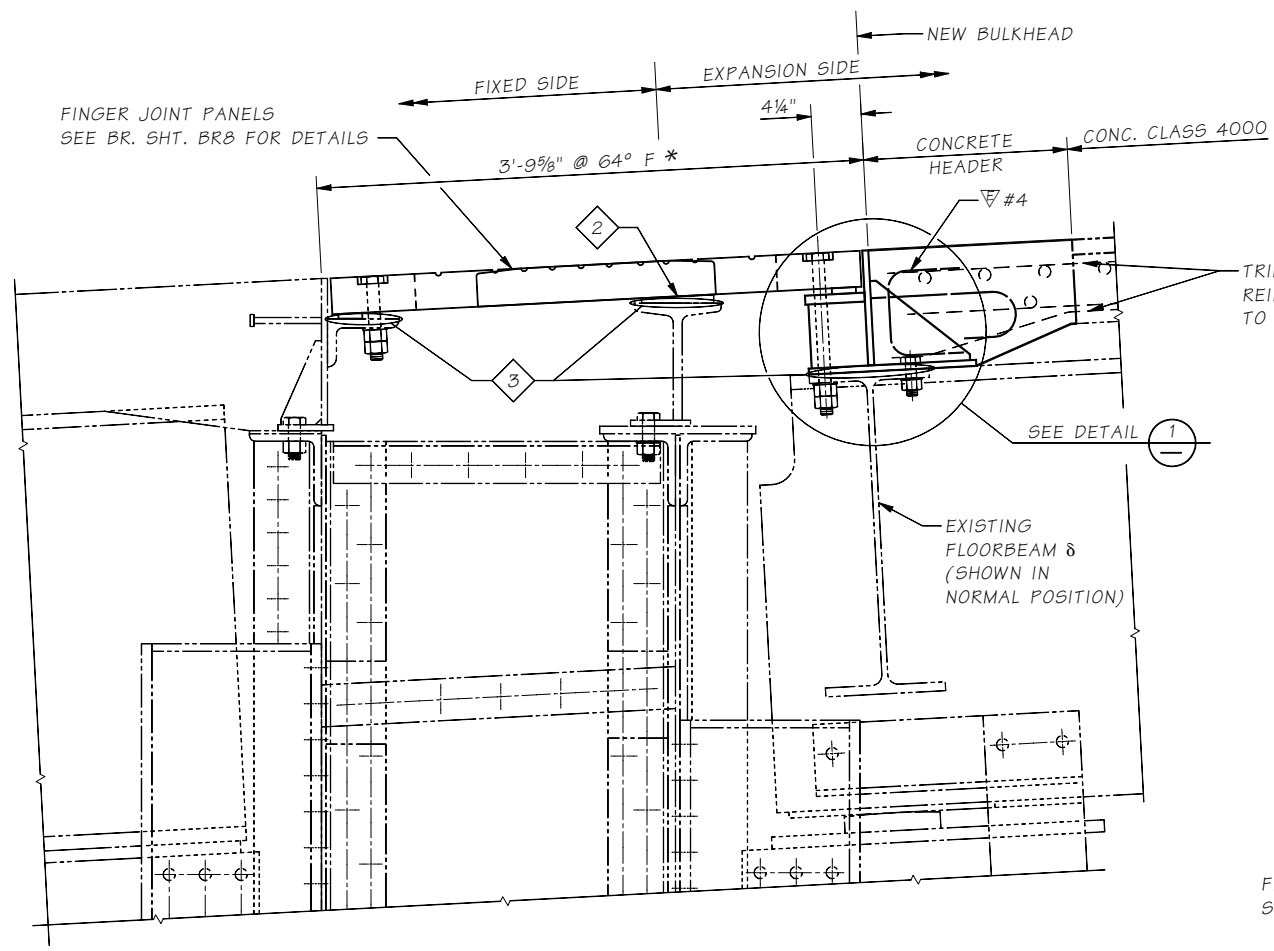
BRIDGE AND STRUCTURES OFFICE



SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1  
EXPANSION JOINT MODIFICATION  
REMOVAL DETAILS - BENT C-D

BRIDGE SHEET NO.  
BR4  
SHEET 7 OF 17 SHEETS





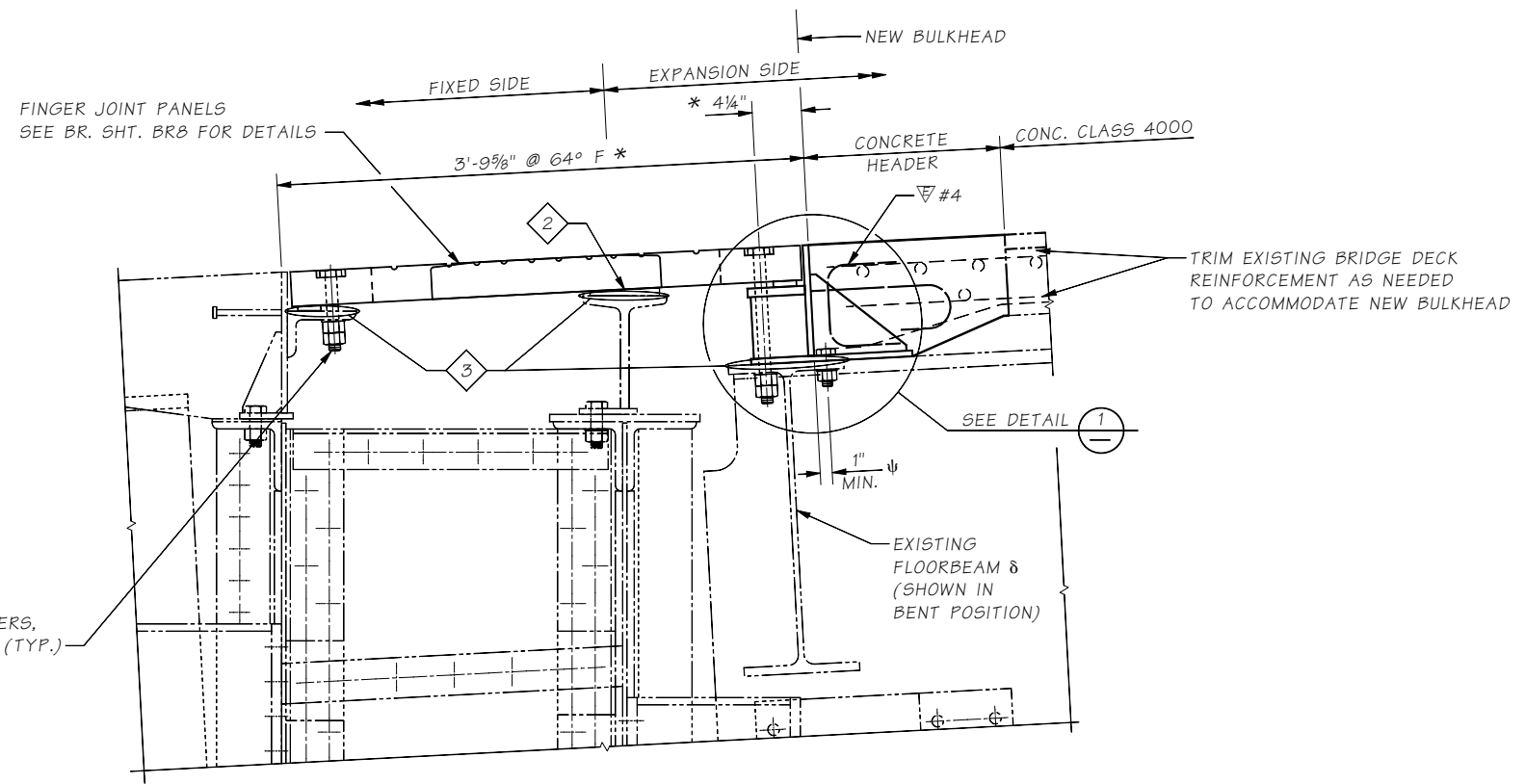
SECTION A  
BR3

δ EXISTING FLOORBEAM IS BENT APPROXIMATELY 2" OUT OF PLANE AT C/L OF BRIDGE. CONTRACTOR SHALL USE A CHALK LINE OR OTHER DEVICE TO ENSURE NEW BULKHEAD ASSEMBLY AND FINGER JOINT PANELS ARE ALIGNED NORMAL TO C/L BRIDGE. LAYOUT BOLT HOLES AND STIFFENER LOCATIONS IN THE FIELD AND PROVIDE A TEMPLATE TO USE FOR FABRICATION OF BOLT HOLES AND STIFFENERS FOR THE NEW BULKHEAD ASSEMBLY.

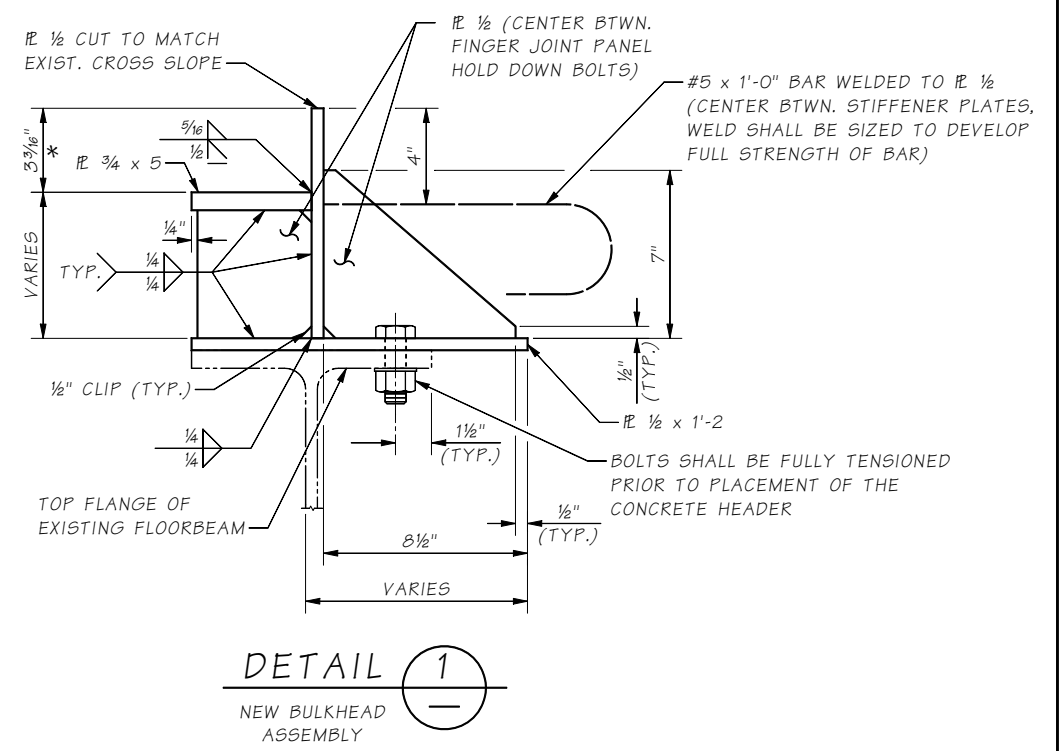
\* CONTRACTOR TO FIELD VERIFY DIMENSION PRIOR TO NEW BULKHEAD ASSEMBLY FABRICATION AND INSTALLATION

ψ IF LESS THAN 1", NOTIFY THE ENGINEER

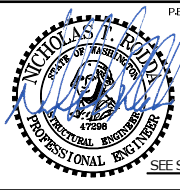
- 1 FINGER JOINT PANEL HOLD DOWN BOLTS AND ASSOCIATED HARDWARE SHALL CONFORM TO SECTION 9-06.5(4) AND SHALL BE HOT DIPPED GALVANIZED.
- 2 FINGER JOINT PANELS SHALL HAVE FULL BEARING AT CENTER SUPPORT
- 3 PRIOR TO INSTALLATION OF THE NEW BULKHEAD ASSEMBLY AND FINGER JOINT PANELS, SURFACES SHALL BE PREPARED DOWN TO CLEAN BARE STEEL IN ACCORDANCE WITH SSPC-SP 15, COMMERCIAL GRADE POWER TOOL CLEANING AND PAINTED WITH ONE COAT OF AN APPROVED PRIMER CONFORMING TO SECTION 9-08.1(2)F.



SECTION B  
BR3



Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS CLARK BR\window files\007 - BENT CD FINGER JOINT DETAILS.wnd					
Supervisor	Rodda, NT			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
Designed By	Rodda, NT	02/22		10	WASH.		TOTAL SHEETS
Checked By	Chavez, G	06/22					
Detailed By	Davis, E	02/22					
Bridge Projects Engr.				JOB NUMBER			
Prelim. Plan By				22X338			
Architect/Specialist				CONTRACT NO.			
DATE		REVISION		BY	APP'D		



BRIDGE AND STRUCTURES OFFICE



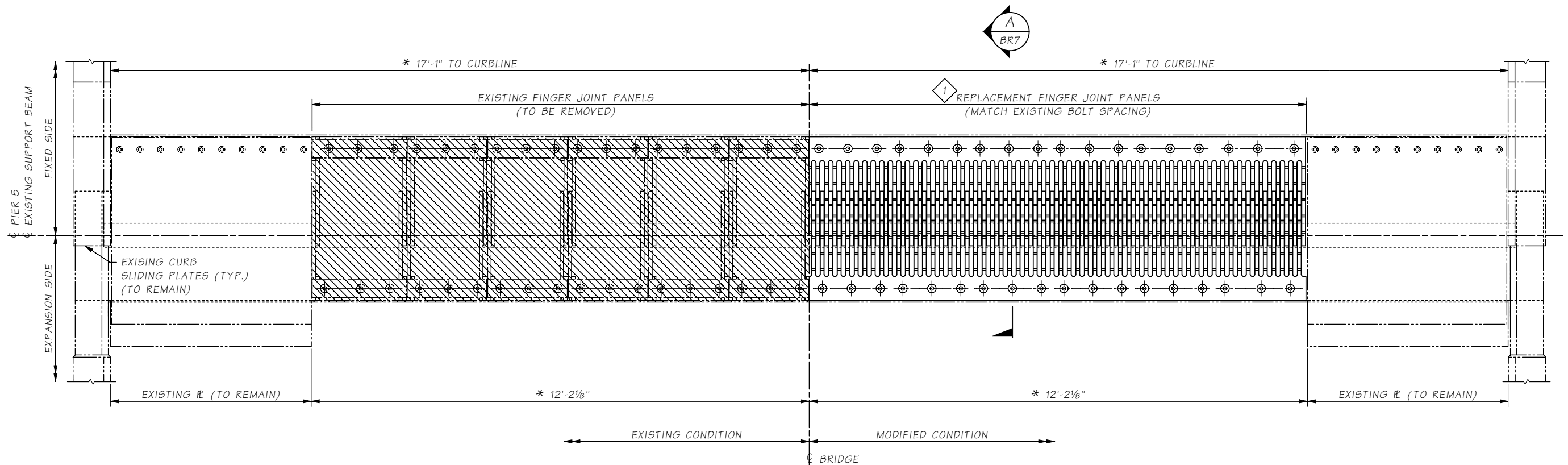
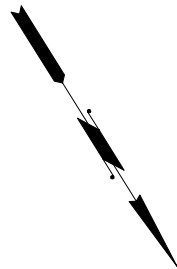
SEE SHEET CT1



SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1  
EXPANSION JOINT MODIFICATION  
MODIFICATION DETAILS - BENT C-D

BRIDGE SHEET NO.  
BR5  
SHEET 8 OF 17 SHEETS





PLAN

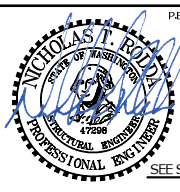
\* CONTRACTOR TO FIELD VERIFY DIMENSION PRIOR TO FINGER JOINT PANEL FABRICATION

- LIMITS OF REMOVAL

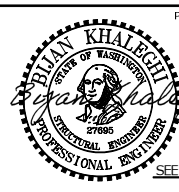
1 FINGER JOINT PANEL LENGTHS SHALL BE AT THE CONTRACTOR'S OPTION, EXCEPT THAT EACH PANEL SHALL BE HELD DOWN BY NO FEWER THAN 3 BOLTS. PANEL FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AS A TYPE 2 WORKING DRAWING.

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR\window files\005 -REMOVAL PLAN.wnd					
Supervisor	Rodda, NT			REGION NO.	STATE	FED. AID PROJ. NO.	SHEET NO.
Designed By	Rodda, NT	02/22		10	WASH.		TOTAL SHEETS
Checked By	Chavez, G	06/22					
Detailed By	Davis, E	02/22					
Bridge Projects Engr.				JOB NUMBER			
Prelim. Plan By				22X338			
Architect/Specialist				CONTRACT NO.			
DATE	REVISION	BY	APP'D				

Mon Oct 03 13:48:12 2022

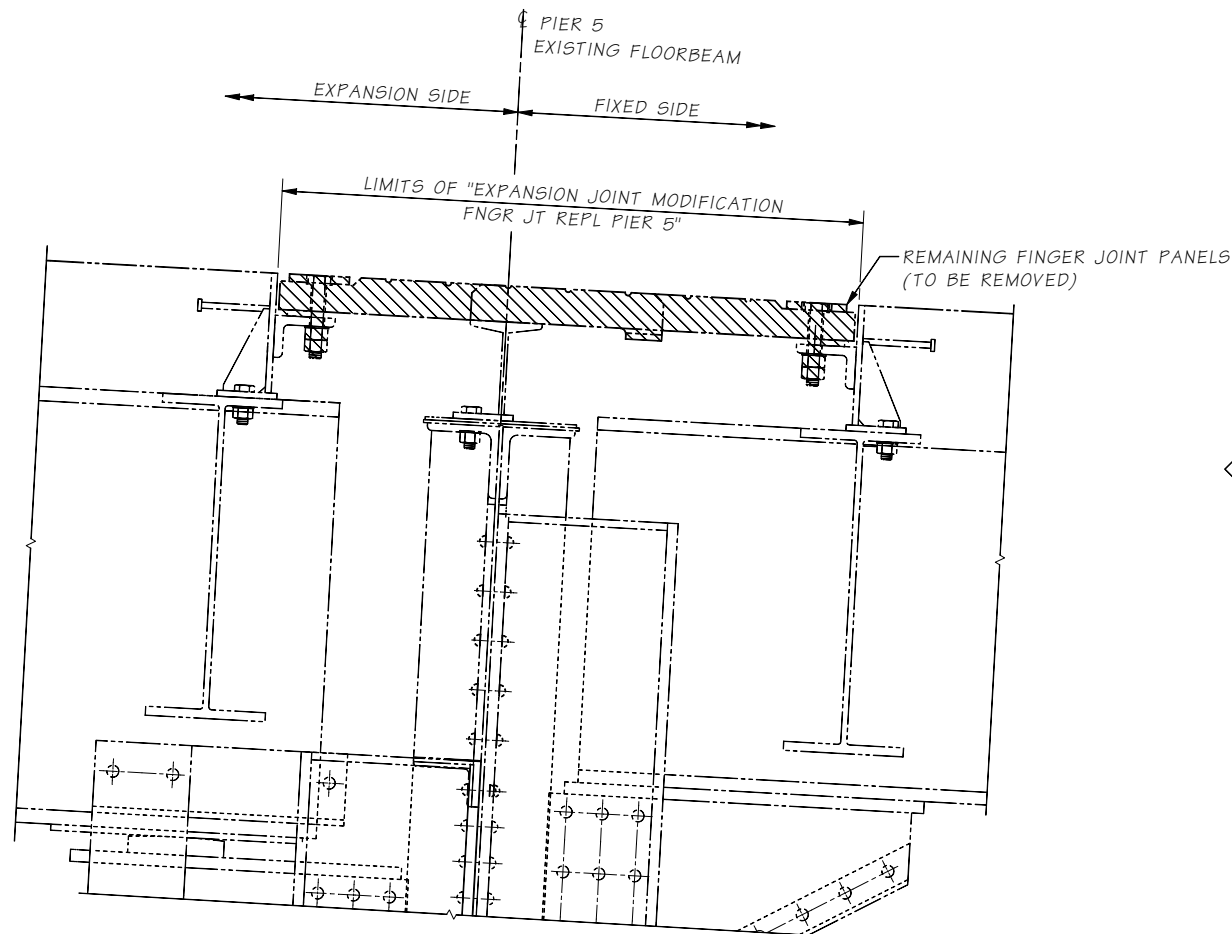


BRIDGE AND STRUCTURES OFFICE



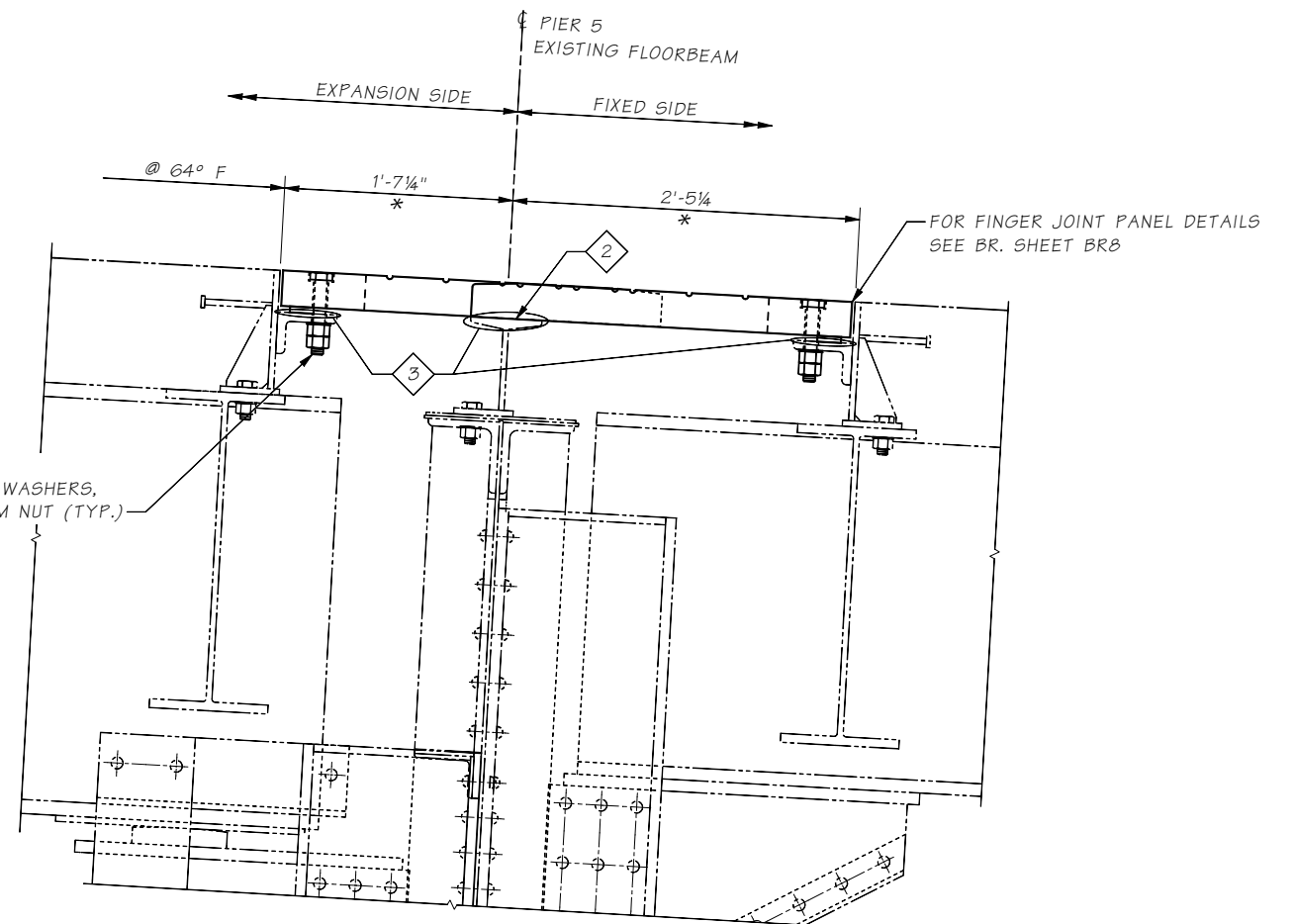
SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1  
EXPANSION JOINT MODIFICATION  
PLAN - PIER 5

BRIDGE SHEET NO.  
BR6  
SHEET 9 OF 17 SHEETS



SECTION A  
EXISTING CONDITION BR6

- LIMITS OF REMOVAL



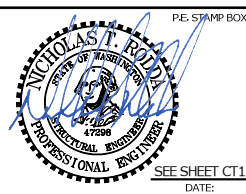
SECTION A  
MODIFIED CONDITION BR6

\* CONTRACTOR TO FIELD VERIFY DIMENSION PRIOR TO FINGER JOINT PANEL REMOVAL AND FABRICATION

- 1 FINGER JOINT PANEL HOLD DOWN BOLTS AND ASSOCIATED HARDWARE SHALL CONFORM TO SECTION 9-06.5(4) AND SHALL BE HOT DIPPED GALVANIZED.
- 2 FINGER JOINT PANELS SHALL HAVE FULL BEARING AT CENTER SUPPORT
- 3 PRIOR TO INSTALLATION OF THE NEW BULKHEAD ASSEMBLY AND FINGER JOINT PANELS, SURFACES SHALL BE PREPARED DOWN TO CLEAN BARE STEEL IN ACCORDANCE WITH SSPC-SP 15, COMMERCIAL GRADE POWER TOOL CLEANING AND PAINTED WITH ONE COAT OF AN APPROVED PRIMER CONFORMING TO SECTION 9-08.1(2)F.

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR>window files\006 - REMOVAL DETAILS.wnd					
Supervisor	Rodda, NT						
Designed By	Rodda, NT	02/22					
Checked By	Chavez, G	06/22					
Detailed By	Davis, E	02/22					
Bridge Projects Engr.							
Prelim. Plan By							
Architect/Specialist							
	DATE	REVISION	BY	APP'D			

Mon Oct 03 13:48:14 2022

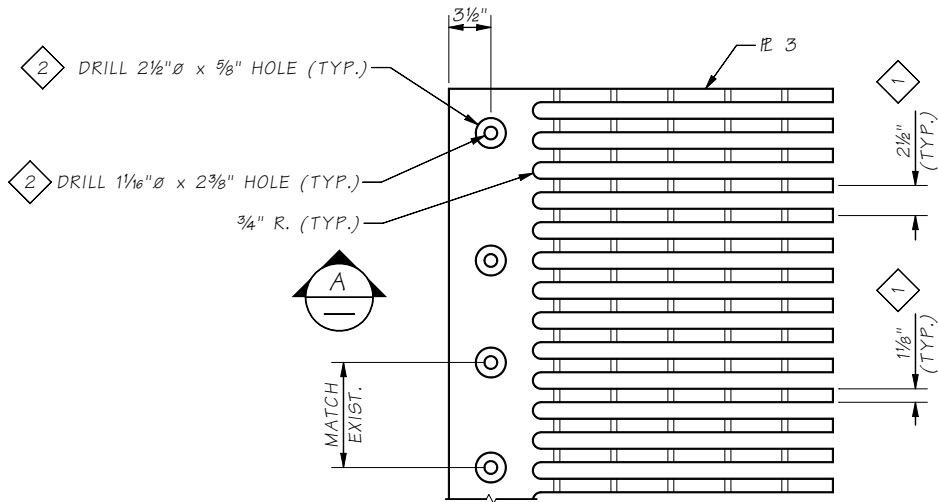


BRIDGE AND STRUCTURES OFFICE

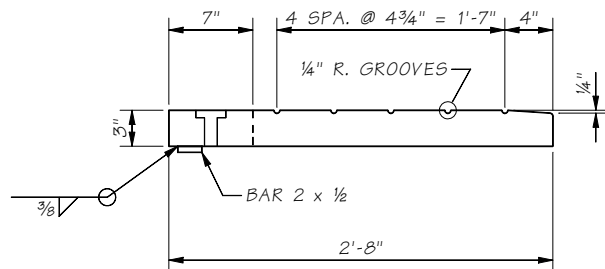


SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1  
EXPANSION JOINT MODIFICATION  
DETAILS - PIER 5

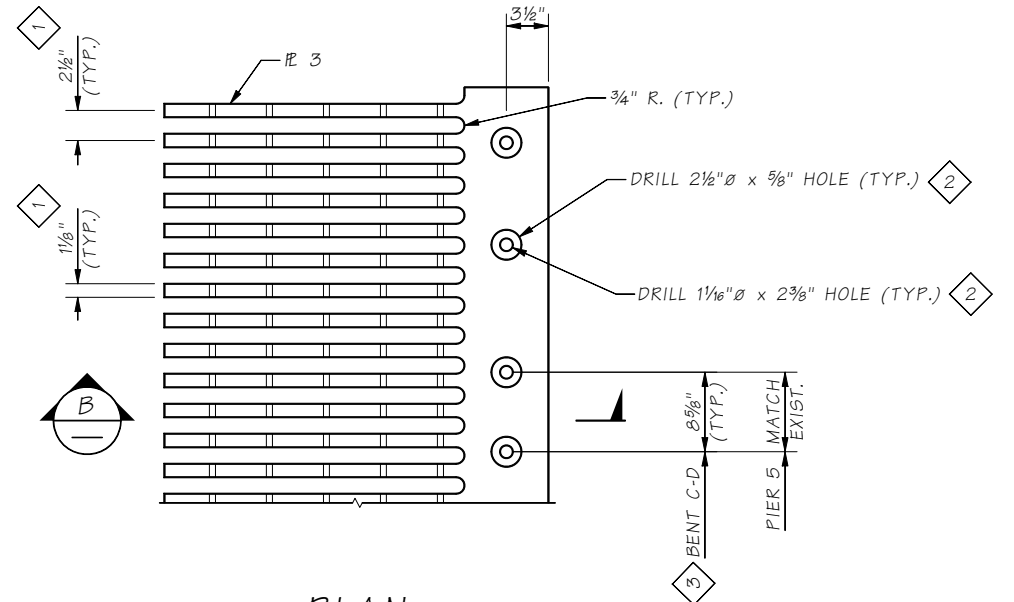
BRIDGE SHEET NO. BR7  
SHEET 10 OF 17 SHEETS



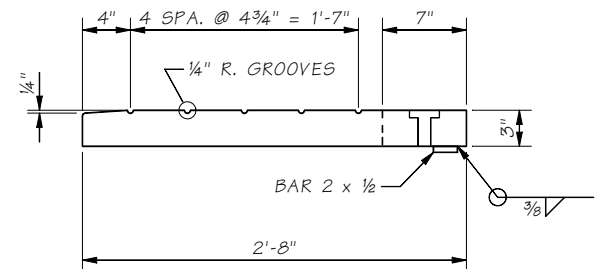
PLAN  
FIXED SIDE



SECTION A



PLAN  
EXPANSION SIDE

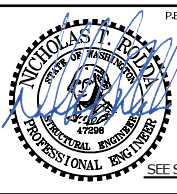


SECTION B

- 1 PANELS SHALL BE INSTALLED AND ALIGNED SUCH THAT THE GAP BETWEEN ADJACENT FINGERS IS  $\frac{1}{8}$ "  $\pm$   $\frac{1}{32}$ ".
- 2 HOLES SHALL BE SHOP DRILLED PRIOR TO GALVANIZING.
- 3 BOLT SPACING MAY BE ADJUSTED TO EITHER REUSE OR MISS EXISTING HOLES IN EXISTING FLOORBEAM TOP FLANGE. WHERE A CONFLICT OCCURS, NEW HOLES SHALL BE RELOCATED A MINIMUM OF 3" FROM EXISTING HOLE.

NOTE: ALL FINGER JOINT PANEL FEATURES AND DIMENSIONS SHOWN ON THIS SHEET ARE BASED ON AS-BUILT PLANS. ALL DIMENSIONS SHOWN ON THIS SHEET ARE TO BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS AND PROCEEDING WITH FABRICATION. PANEL FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AS A TYPE 2 WORKING DRAWING.

Bridge Design Engr.	Khaleghi, B	M:\W-Team\BR433-1 LEWIS_CLARK BR>window files\012 - FINGER JOINT PANELS.WND							
Supervisor	Rodda, NT								
Designed By	Rodda, NT	02/22							
Checked By	Chavez, G	06/22							
Detailed By	Davis, E	02/22							
Bridge Projects Engr.									
Prelim. Plan By									
Architect/Specialist									
DATE	REVISION	BY	APP'D						

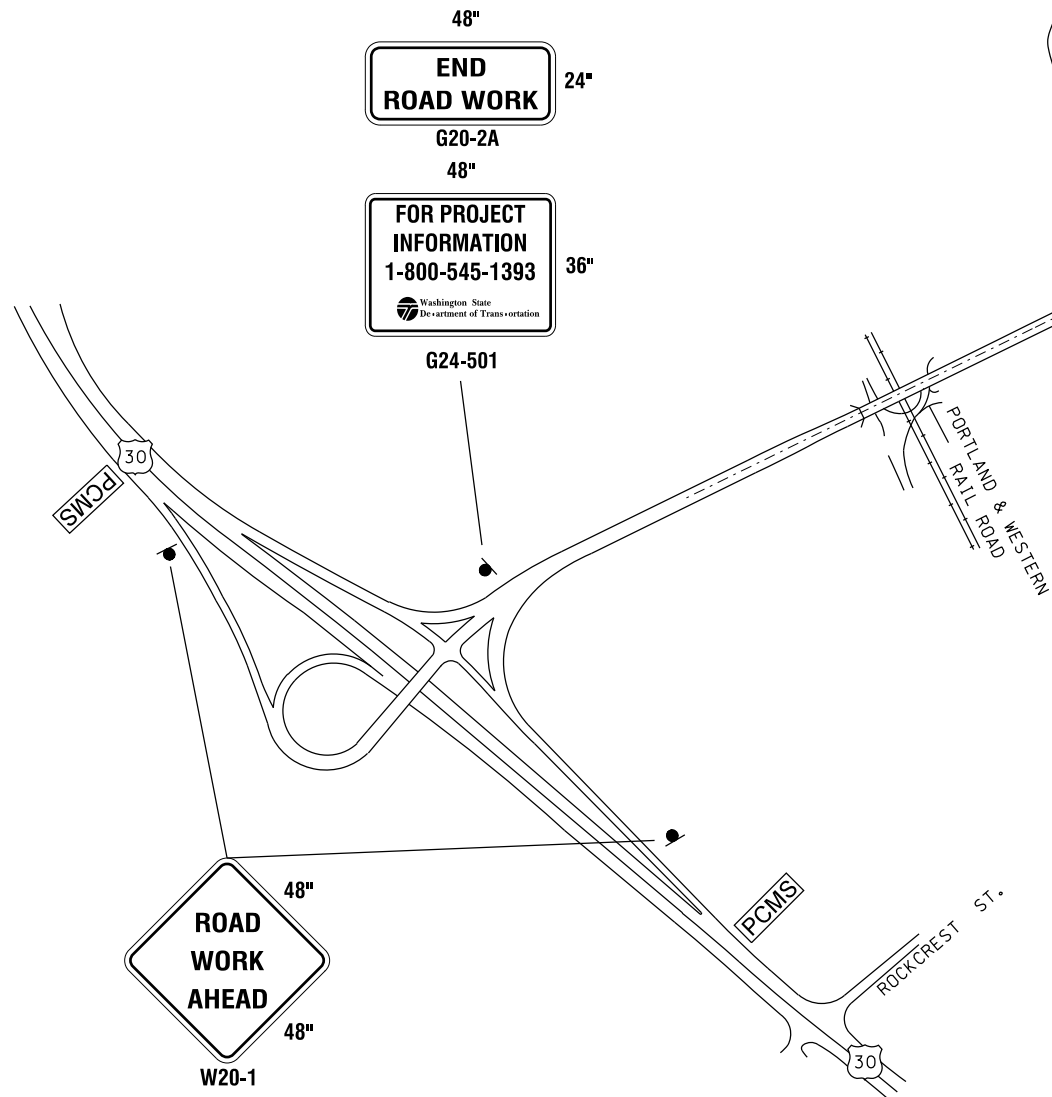
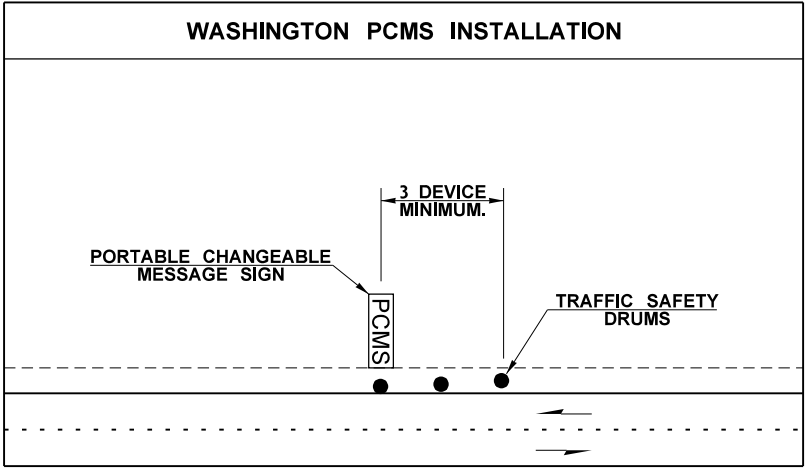
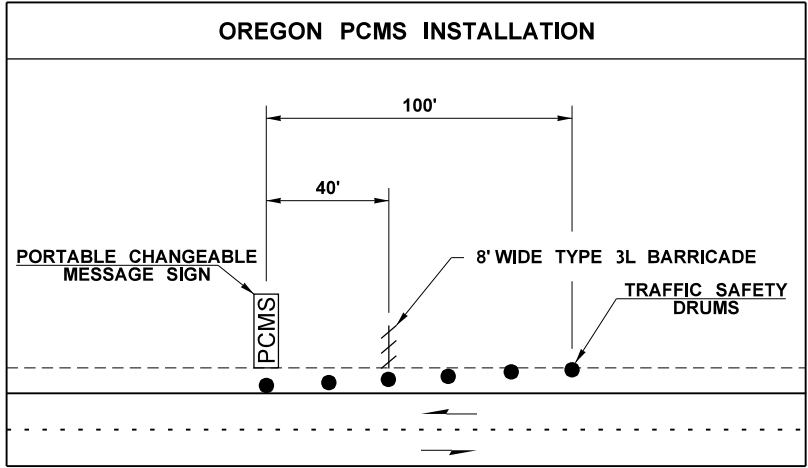


BRIDGE  
AND  
STRUCTURES  
OFFICE



SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
COLUMBIA R-LEWIS & CLARK BR. NO. 433/1  
FINGER JOINT PANEL DETAILS

BRIDGE  
SHEET  
NO.  
BR8  
SHEET  
11  
OF  
17  
SHEETS



# CONSTRUCTION SIGNS CLASS A

NOT TO SCALE

PCMS MESSAGE #1	
PHASE 1	PHASE 2
SR433 BRIDGE WORK	STARTING X/XX
2.0 SEC	2.0 SEC

SEE NOTE 3

PCMS MESSAGE #2	
PHASE 1	PHASE 2
SR433 BRIDGE WORK	ONE LANE ACROSS BRIDGE
2.0 SEC	2.0 SEC

SEE NOTE 4

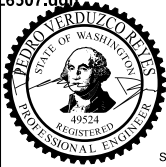
PCMS MESSAGE #3	
PHASE 1	PHASE 2
SR433 BRIDGE WORK	LANE SHIFT ON BRIDGE
2.0 SEC	2.0 SEC

SEE NOTE 5

## NOTES

1. ALL SIGNS ARE BLACK ON ORANGE UNLESS STATED OTHERWISE.
2. SIGN AND PCMS LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS TO BE MARKED BY THE ENGINEER.
3. PCMS BOARDS SHALL BE OPERATIONAL 7 CALENDAR DAYS PRIOR TO CONSTRUCTION START DATE. USE PCMS MESSAGE #1 DURING THESE DAYS.
4. USE PCMS MESSAGE #2 DURING SINGLE LANE CLOSURES.
5. USE PCMS MESSAGE #3 DURING LANE SHIFTS.
6. SEE FC1, FC2, AND FC3 FOR FULL CLOSURE PLAN

FILE NAME	G:\444304\04 - Design\02 - Design Projects\043321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\16507.dgn	REGION NO.	10	STATE	WASH	FED.AID PROJ.NO.	NHPP-0433(012)	SEE SHEET CT1
TIME	10:12:34 AM	JOB NUMBER	22X338	CONTRACT NO.		LOCATION NO.		DATE
DATE	10/14/2022							
PLOTTED BY	satakr							
DESIGNED BY	R. SATAK							
ENTERED BY	R. SATAK							
CHECKED BY	D. DOUMIT							
PROJ. ENGR.	P. REYES							
REGIONAL ADM.	C. FRANCIS	REVISION		DATE	BY			






SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT  
CONSTRUCTION SIGNS CLASS A


Plot 7  
PLAN REF NO  
TC1  
SHEET  
12  
OF  
17  
SHEETS

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R										
HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					HOST VEHICLE WEIGHT > 22,000 lbs.					
< 45 MPH	45-55 MPH	> 55 MPH			< 45 MPH	45-55 MPH	> 55 MPH			
100'	123'	172'			74'	100'	150'			
PROTECTIVE VEHICLE (WORK VEHICLE) = R										
NO SPECIFIED DISTANCE REQUIRED										

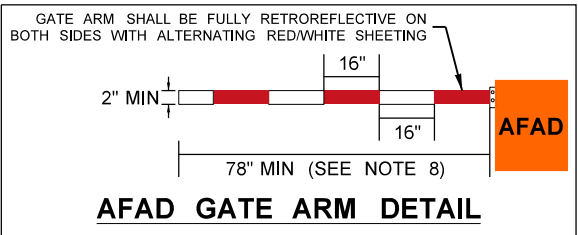
CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/45	30	60

**STOP CONDITION**  
**SOLID RED  
12" LENS  
ILLUMINATED**  
**DULL BLACK  
SIGNAL BACKPLATE**

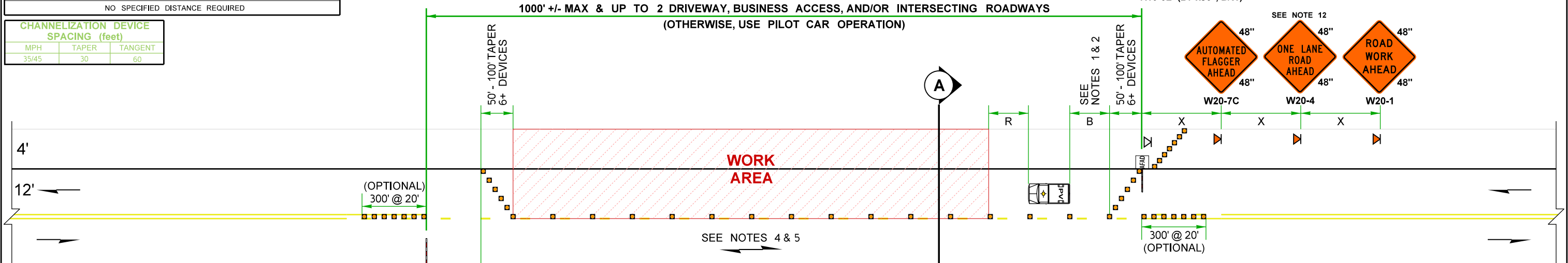
**SLOW CONDITION**  
**FLASHING YELLOW  
12" LENS  
ILLUMINATED**

**TRANSITION TO STOP**  
**SOLID YELLOW  
12" LENS  
ILLUMINATED FOR  
5-6 SECONDS**

**AFAD RED/YELLOW LENS DETAIL**





SIGN SPACING = X (1)		
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND DRIVEWAYS. (2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.		





- NOTES:
- AVOID PLACING LANE CLOSURE TAPERS WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL & VERTICAL CURVES BY ADJUSTING LONGITUDINAL BUFFER SPACE.
  - IF LONGITUDINAL BUFFER SPACE IS REDUCED FROM DISTANCES LISTED IN TABLE, UPGRADE PROTECTIVE VEHICLE TO A TRANSPORTABLE ATTENUATOR.
  - 28" TRAFFIC CONES RECOMMENDED. 36" TRAFFIC CONES, 42" TALL CHANNELIZATION DEVICES, OR TRAFFIC SAFETY DRUMS MAY ALSO BE USED.
  - BICYCLISTS MAY BE COMBINED WITH ALTERNATING VEHICULAR TRAFFIC. BIKES TO CLEAR PRIOR TO FLAGGERS RELEASING ONCOMING TRAFFIC.
  - ACCOMEDATE PEDESTRIANS VIA SHUTTLE THROUGH LANE CLOSURE, USING THE PAVED SHOULDER OPPOSITE THE WORK AREA, OR ANOTHER METHOD THE ENGINEER ACCEPTS.
  - SEE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS:  
1-07.8(1) HIGH-VISIBILITY APPAREL  
1-10.3(1)A FLAGGERS AND NIGHTTIME ILLUMINATION  
1-10.3(2)ATRAFFIC CONTROL PROCEDURES  
9-35.124-INCH STOP/SLOW PADDLE SIZE
  - FOR PROJECT-SPECIFIC REQUIREMENTS,SEE SPECIAL PROVISIONS.
  - AFAD GATE ARM SHALL REACH HALFWAY ACROSS LANE BEING CONTROLLED ON RED LENS DISPLAY & ASCEND TO AN UPRIGHT POSITION ON FLASHING YELLOW LENS DISPLAY. GATE ARM SHALL NOT DESCEND UNTIL AFTER RED LENS DISPLAYED.
  - FLAGGERS SHALL BE TRAINED IN OPERATION OF AFAD. FLAGGER SHALL BE POSITIONED TO SEE BOTH AFAD AND APPROACHING TRAFFIC (DIGITAL ALTERNATIVES ARE ACCEPTABLE). FLAGGER SHALL HAVE REAL-TIME MONITORING ABILITY. LEAVING AFAD UNATTENDED PROHIBITED.
  - SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
  - ACTUAL CENTERLINE PAVEMENT MARKINGS MAY VARY.
  - PLACE SIGNS W21-1707 AND W8-24 IN BOTH DIRECTIONS OF TRAVEL WHEN STEEL PLATE IS IN USE; REMOVE BOTH WHEN STEEL PLATE IS NOT IN USE


**LEGEND:**


 TEMPORARY SIGN LOCATION

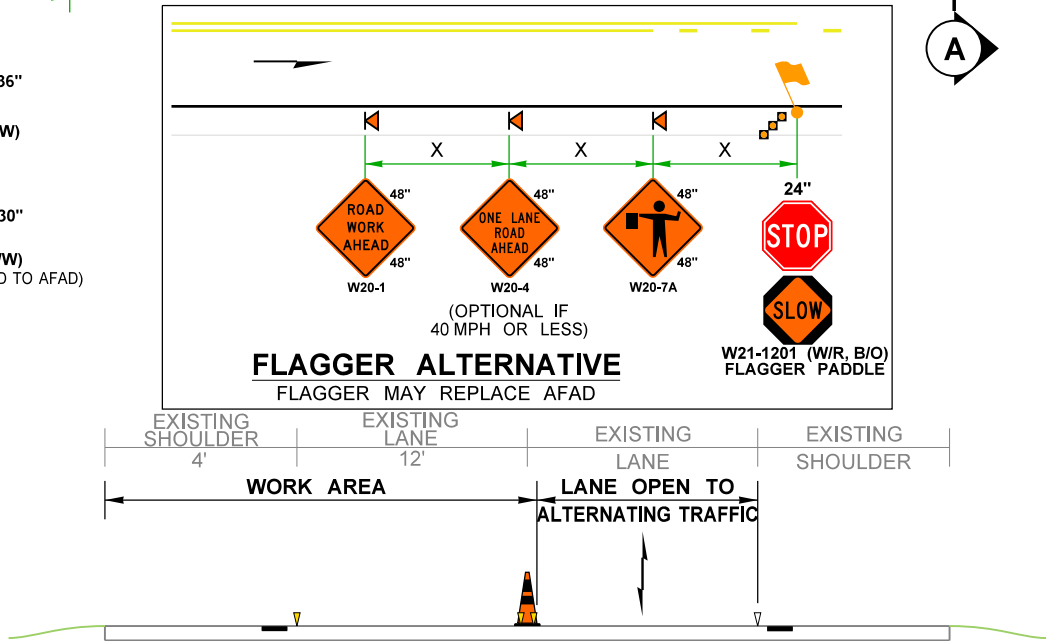
 28" REFLECTIVE TRAFFIC CONE (SEE NOTE 3)

 OPTIONAL CHANNELIZATION DEVICE

 PROTECTIVE VEHICLE (SEE NOTE 2)

 FLAGGER

 AUTOMATED FLAGGER ASSISTANCE DEVICE (SEE NOTE 8)



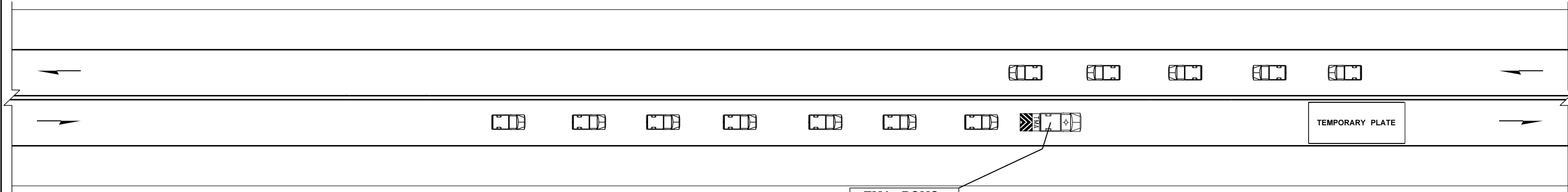
**SECTION A-A**

**ALTERNATING 1-LANE, 2-WAY TRAFFIC: AFAD-CONTROLLED**

**(35 MPH)**

**NOT TO SCALE**

FILE NAME													G:\444304\04 - Design\02 - Design Projects\ID43321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\X16507.dgn																							
TIME			10:15:36 AM																			REGION NO.			STATE			FED.AID PROJ.NO. NHPP-0433(012)								
DATE			10/14/2022																			10			WASH											
PLOTTED BY			satakr																																	
DESIGNED BY			R. SATAK																						JOB NUMBER			LOCATION NO.								
ENTERED BY			R. SATAK																			22X338														
CHECKED BY			D. DOUMIT																			CONTRACT NO.														
PROJ. ENGR.			P. REYES																																	
REGIONAL ADM.			C. FRANCIS																																	



TMA PCMSs	
1	2
WORKERS ON ROADWAY	DO NOT PASS
2.0 SEC	2.0 SEC

USE PCMS ON EACH TRANSPORTABLE ATTENUATOR.  
SEE NOTE 8

NOTES:

1. THIS ROLLING SLOWDOWN CAN BE USED WITH APPLICABLE LANE CLOSURE TRAFFIC CONTROL PLANS.
2. NOTIFY WSDOT; WASHINGTON STATE PATROL; TRANSIT (WHEN APPLICABLE); AND LOCAL FIRE, POLICE, AND EMERGENCY SERVICE AGENCIES.
3. NOTIFY THE REGIONAL WSDOT TRAFFIC MANAGEMENT CENTER AT 360-905-2269 PRIOR TO COMMENCING EACH ROLLING SLOWDOWN AND AFTER IT FINISHES.
4. TRAFFIC CONTROL VEHICLES SHALL ACTIVATE FLASHING AMBER LAMPS.
5. THE ROLLING SLOW DOWN IS TO BE USED FOR EMERGENCIES AND SHORT TERM MAINTENANCE OF THE TEMPORARY PLATFORM ONLY.
6. LANE CLOSURE METHOD - STOPPING TRAFFIC FOR UP TO 5 MINUTES IS ALLOWED, THEN TRAFFIC MUST BE ALLOWED TO CLEAR BEFORE STOPPING AGAIN; OR AS APPROVED BY THE ENGINEER.
7. ALL TMA'S MUST BE EQUIPPED WITH PCMS

LEGEND



TRUCK MOUNTED ATTENUATOR

ROLLING SLOW DOWN  
(35 MPH)

FILE NAME										G:\444304\04 - Design\02 - Design Projects\043321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\X16507.dgn										Plot 13																																																																																																													
TIME		10:13:33 AM									REGION NO.		STATE		FED.AID PROJ.NO.																				PLAN REF NO																																																																																														
DATE		10/14/2022									10		WASH		NHPP-0433(012)																				TC3																																																																																														
PLOTTED BY		satakr																																																																																																																															
DESIGNED BY		R. SATAK																																																																																																																															
ENTERED BY		R. SATAK											JOB NUMBER																																																																																																																				
CHECKED BY		D. DOUMIT											22X338																																																																																																																				
PROJ. ENGR.		P. REYES											CONTRACT NO.		LOCATION NO.																																																																																																																		
REGIONAL ADM.		C. FRANCIS																																																																																																																															
REVISION										DATE										BY																																																																																																													



PCMS	
1	2
SR 433 CLOSED "DATES"	USE ALT ROUTE
2.0 SEC	2.0 SEC

PCMS LOCATION TO  
BE STAKED BY  
ENGINEER

LOCATE PCMS PER  
WSDOT STANDARD  
SPEC. 1-10.3(3)C.

SEE NOTE 5

PCMS		
1	2	3
SR 433 CLOSED	XX/XX TO XX/XX	USE ALT ROUTE
1.5 SEC	1.5 SEC	1.5 SEC

STRATEGICALLY FIELD LOCATE  
NEAR FUTURE TRAFFIC HOLD  
FOR 7 DAYS MINIMUM.

DESIREABLE TO PLACE JUST OUT  
OF TOWN OR NEAR ALTERNATIVE  
ROUTE SO MOTORISTS CAN  
AVOID WORK ZONE.

SEE NOTE 5

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
35/45	30	60

LEGEND

- TALL CHANNELIZING DEVICE
- TYPE 3 BARRICADE
- PCMS PORTABLE MESSAGE BOARD
- SIGN ICON

NOTES:

- ALL SIGNS ARE POST MOUNTED UNLESS SPECIFIED OTHERWISE
- ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS SPECIFIED OTHERWISE
- PCMS TO BE USED TWO WEEKS IN ADVANCE FOR FULL ROADWAY CLOSURES
- TYPE III BARRICADES SHALL BE INSTALLED PER WSDOT STANDARD PLAN K-80.20
- IF FULL CLOSURE OCCURS DURING A CHANGE IN MONTH USE 3 MESSAGE PCMS
- WSDOT SHALL BE NOTIFIED 30 WORKING DAYS IN ADVANCE OF FULL BRIDGE CLOSURE

60"

ROAD CLOSED  
1/3 MILES AHEAD  
LOCAL TRAFFIC ONLY

30"

R11-3 (B/W)

MOUNTED ON TYPE III  
BARRICADE

48"

ROAD  
CLOSED

30"

R11-2  
B/W

MOUNTED ON TYPE III  
BARRICADE

48"

ROAD  
CLOSED

30"

R11-2  
B/W

MOUNTED ON TYPE III  
BARRICADE

LEFT LANE  
MUST  
TURN LEFT

R3-7

LANE ENDS  
MERGE  
RIGHT

W9-2R

48"

48"

ROAD  
WORK  
AHEAD

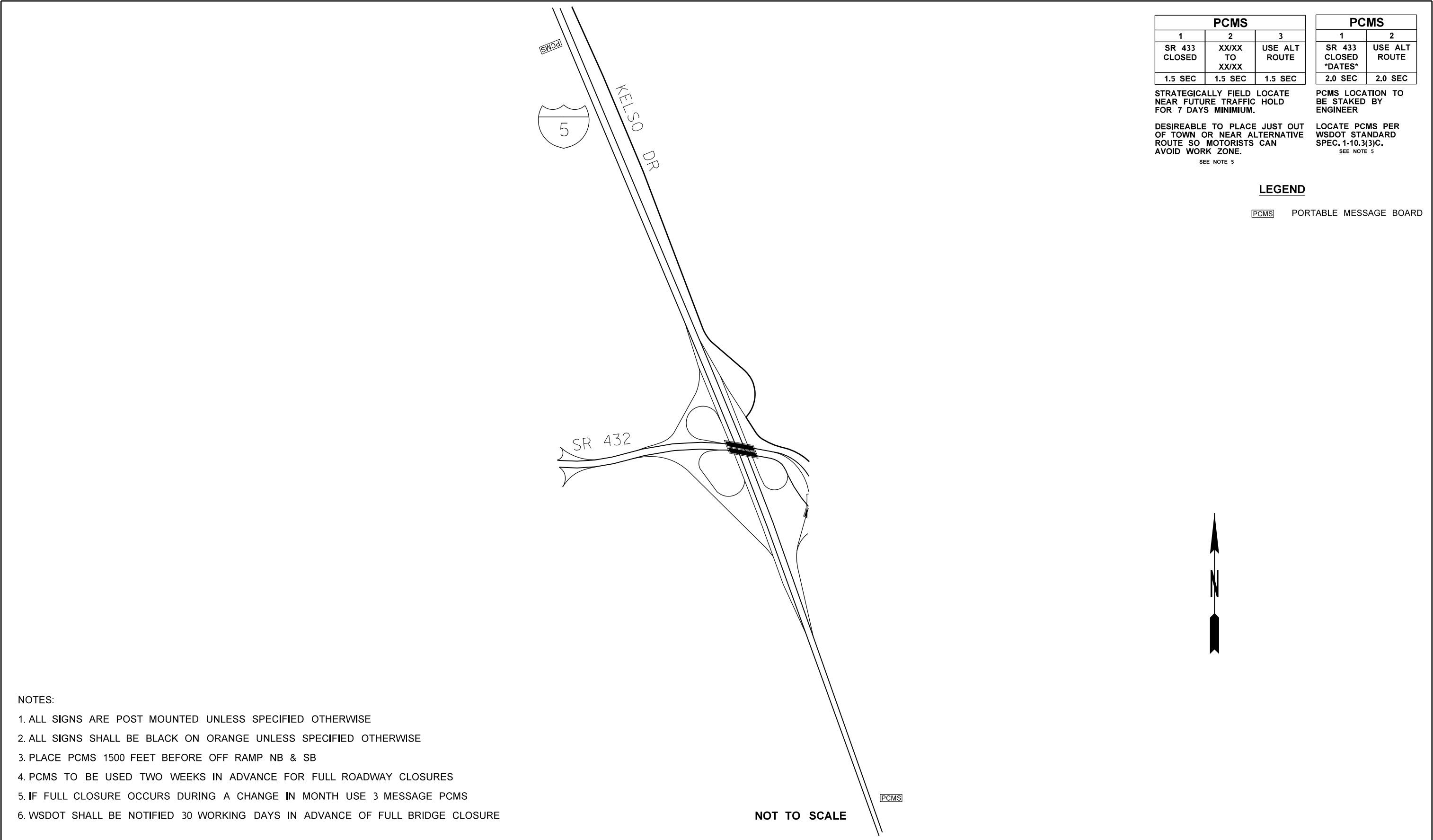
W20-1

48"

48"

NOT TO SCALE

FILE NAME G:\444304\04 - Design\02 - Design Projects\D43321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\XL6507.dgn										Plot 15	
TIME	10:50:57 AM					REGION NO.	STATE	FED.AID PROJ.NO. NHPP-0433(012)			PLAN REF NO
DATE	10/14/2022					10	WASH				FC1
PLOTTED BY	satakr					JOB NUMBER					SHEET 15 OF 17 SHEETS
DESIGNED BY	R. SATAK					22X338					
ENTERED BY	R. SATAK					CONTRACT NO.	LOCATION NO.				
CHECKED BY	D. DOUMIT										
PROJ. ENGR.	P. REYES										
REGIONAL ADM.	C. FRANCIS										



PCMS			PCMS	
1	2	3	1	2
SR 433 CLOSED	XX/XX TO XX/XX	USE ALT ROUTE	SR 433 CLOSED *DATES*	USE ALT ROUTE
1.5 SEC	1.5 SEC	1.5 SEC	2.0 SEC	2.0 SEC

STRATEGICALLY FIELD LOCATE  
NEAR FUTURE TRAFFIC HOLD  
FOR 7 DAYS MINIMUM.

DESIREABLE TO PLACE JUST OUT  
OF TOWN OR NEAR ALTERNATIVE  
ROUTE SO MOTORISTS CAN  
AVOID WORK ZONE.

SEE NOTE 5

PCMS LOCATION TO  
BE STAKED BY  
ENGINEER

LOCATE PCMS PER  
WSDOT STANDARD  
SPEC. 1-10.3(3)C.

SEE NOTE 5




LEGEND

PCMS PORTABLE MESSAGE BOARD

- NOTES:
- 1. ALL SIGNS ARE POST MOUNTED UNLESS SPECIFIED OTHERWISE
  - 2. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS SPECIFIED OTHERWISE
  - 3. PLACE PCMS 1500 FEET BEFORE OFF RAMP NB & SB
  - 4. PCMS TO BE USED TWO WEEKS IN ADVANCE FOR FULL ROADWAY CLOSURES
  - 5. IF FULL CLOSURE OCCURS DURING A CHANGE IN MONTH USE 3 MESSAGE PCMS
  - 6. WSDOT SHALL BE NOTIFIED 30 WORKING DAYS IN ADVANCE OF FULL BRIDGE CLOSURE

FILE NAME										G:\444304\04 - Design\02 - Design Projects\D43321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\X16507.dgn																				Plot 16																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
TIME		10:51:41 AM																REGION NO.		STATE		FED.AID PROJ.NO. NHPP-0433(012)																														PLAN REF NO																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
DATE		10/14/2022																10 WASH																																												FC2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
PLOTTED BY		satakr																				JOB NUMBER 22X338										CONTRACT NO.										LOCATION NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

- |   |                          |
|---|--------------------------|
|  | TYPE 3 BARRICADE         |
|  | PORTABLE MESSAGE BOARD   |
|  | TALL CHANNELIZING DEVICE |

PCMS	
1	2
SR 433 CLOSED *DATES*	USE ALT ROUTE
2.0 SEC	2.0 SEC

PCMS LOCATION TO  
BE STAKED BY  
ENGINEER

LOCATE PCMS PER  
WSDOT STANDARD  
SPEC. 1-10.3(3)C.

SEE NOTE 7


PCMS		
1	2	3
SR 433 CLOSED	XX/XX TO XX/XX	USE ALT ROUTE
1.5 SEC	1.5 SEC	1.5 SEC

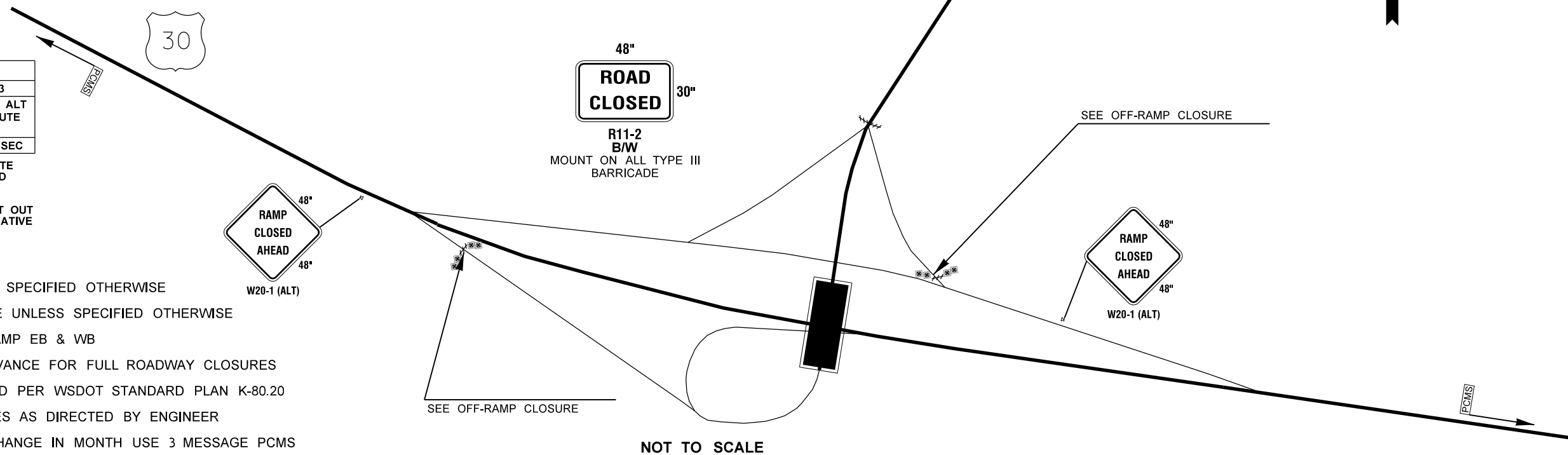
STRATEGICALLY FIELD LOCATED  
NEAR FUTURE TRAFFIC HOLD  
FOR 7 DAYS MINIMUM.

DESIREABLE TO PLACE JUST OUT  
OF TOWN OR NEAR ALTERNATIVE  
ROUTE SO MOTORISTS CAN  
AVOID WORK ZONE.

SEE NOTE 7

NOTES:

- 
- W20-1 (ALT)
1. ALL SIGNS ARE POST MOUNTED UNLESS SPECIFIED OTHERWISE
  2. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS SPECIFIED OTHERWISE
  3. PLACE PCMS 1500 FEET BEFORE OFF RAMP EB & WB
  4. PCMS TO BE USED TWO WEEKS IN ADVANCE FOR FULL ROADWAY CLOSURES
  5. TYPE III BARRICADES SHALL BE INSTALLED PER WSDOT STANDARD PLAN K-80.20
  6. USE DRUMS IN ADDITION TO BARRICADES AS DIRECTED BY ENGINEER
  7. IF FULL CLOSURE OCCURS DURING A CHANGE IN MONTH USE 3 MESSAGE PCMS
  8. WSDOT SHALL BE NOTIFIED 30 WORKING DAYS IN ADVANCE OF FULL BRIDGE CLOSURE



**NOT TO SCALE**

FILE NAME	G:\444304\04 - Design\02 - Design Projects\ID43321B - SR433 Lewis and Clark Bridge Finger Joint Replacement\20-CADD-Plans\20-11 PS&E Sheets\X\6507.dgn									
TIME	10:52:11 AM					REGION NO.	STATE	FED.AID PROJ.NO. NHPP-0433(012)		
DATE	10/14/2022					10	WASH			
PLOTTED BY	satakr					JOB NUMBER 22X338			LOCATION NO.	
DESIGNED BY	R. SATAK									
ENTERED BY	R. SATAK									
CHECKED BY	D. DOUMIT					CONTRACT NO.				
PROJ. ENGR.	P. REYES									
REGIONAL ADM.	C. FRANCIS	REVISION			DATE	BY				



**Washington State  
Department of Transportation**

SR 433  
LEWIS AND CLARK BRIDGE  
EXPANSION JOINT REPLACEMENT

## FULL CLOSURE PLAN

Plot 17

PLAN REF NO  
**FC1**

SHEET  
17  
OF  
17  
SHEETS